

A CASE OF MELANO-SARCOMA OF THE LOWER JAW IN AN INFANT.

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A BABY of three months was brought to me by its mother for opinion regarding a swelling in the mouth. This tumefaction was at about the middle of the left side of the gum of the lower jaw. It was approximately the size of a small almond, oval, of moderately firm consistency and covered by mucons membrane which was apparently normal. It did not seem particularly tender. The mother had noticed it but a few days previously.



FIG. 1.—Showing the tongue pushed to the opposite side by the tumor.

A fairly deep incision one-half inch long was made in it, but no pus was found. The cut surface seemed to present the ordinary appearance of inflammatory tissue. A simple mouth-wash was prescribed and the mother told to return with the baby in a few days. She did not reappear, however, until the expiration of a month. At that time the swelling had increased to an

enormous extent. It projected well beyond the middle line of the mouth, pushing the tongue far to the opposite side. It was about the size and shape of a duck's egg, its surface of a blackish red. It was dense, firmly attached to the body of the jaw, which, felt externally, was much enlarged and resistant. (See Fig. 1.) A small section was removed and examined microscopically. It showed the typical structure of a melano sarcoma, containing a large amount of pigment.

The condition was explained to the parents. They desired the chance offered by operative procedure, and Dr. W. T. Bull, who kindly saw the case in consultation, agreeing as to its justi-

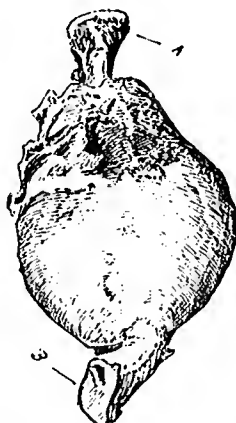


FIG. 11.—Showing the relation in size between tumor and the bone. *a*, condyle. *b*, sawn surface near symphysis.

fiability, the left half of the jaw was removed, under chloroform, at the New York Cancer Hospital in September, 1891. The ordinary incision along the lower border of the bone was used, the body divided a little to the right of the symphysis and the condyle dissected from the glenoid cavity. There was but very little hemorrhage with the exception of that from the internal maxillary artery; this was rather troublesome.

The time occupied in the operation was a little over an hour. The patient took the anæsthetic badly, failed to rally and died two hours after being returned to the ward.

The pathological report¹ is as follows:

The tumor is the size of a large egg, section through its middle measuring 4.7 c.m. in one direction and 3.5 c.m. in the other. It extends from a point just outside the symphysis anteriorly, very nearly to the coronoid process posteriorly. It embraces the body of the jaw excepting at its lower border. It is covered by a thin, fibrous capsule, with the exception of an area about the size of a cent, internally, where it projects into the mouth.

Its cut section shows a blackish centre with a firm whitish periphery. It seems to spring from the periosteum of the lower jaw.

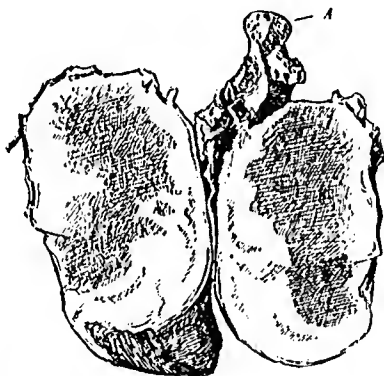


FIG. III.—Cut surface of the tumor. The melanotic portion is shaded. *a*, condyle.

Microscopically it is a melanoma sarcoma. The relation which the tumor bears to the jaw is shown in Fig. II. In Fig. III. the cut surface is represented.

I am conscious of having occupied far too much time in the extirpation of this tumor. Instead of carefully sawing through the body near the symphysis this might well have been hastily cut

¹ Examination made by Dr. G. C. Freeborn, pathologist to the Hospital.

across with forceps, and the same instrument would very quickly have divided the ramus. Considerable time was spent in isolating the lingual nerve. In a word, I feel that the portion of jaw which was the seat of the tumor should have been removed with adjacent tissues in the shortest possible space of time.

I find no record of similar operation on a child of this age.

EDITORIAL ARTICLES.

ARND ON THE METHODS AND RESULTS OF EXCISION OF RECTAL CARCINOMA.¹

In an extensive, thorough and clear work. A. compares the various methods which have been employed in dealing with rectal cancer, details at length the histories of 35 cases operated upon by Koehler, and analyzes 230 additional operations, which he gathers from literature.

The communication is of such interest that it deserves careful study. It is of such length, however, that but few of its features can be noted here. Of interest is it to know that so long ago as 1874, Koehler published an account of an operation devised by himself for removal of cancerous rectum, which consisted in a posterior incision with excision of the coccyx. This he called the "Long posterior incision," and he ascribed to it the advantages which render the now popular operation of Kraske so useful, viz: Extirpation of the cancer is done with greater ease, certainty and completeness than by the older operations from below, and the bleeding is much more easily controlled.

So we must see that the Kraske operation brings to that of Koehler extension of the principle of posterior incision, and consequent ability to remove tumors which have a very high seat.

A. ascribes all credit to Kraske's procedure. He emphasizes with vigor, however, that in the great majority of cases of cancer of the rectum the long incision of Koehler will suffice. Of the modification made by Hochenegg, Henzfeld, Heineke and Levy it is not necessary to speak in detail, the principle is that of Koehler, extended and emphasised by Kraske.

Of the entire number of cases the peritoneum was wounded in 69, and of these only 9 (13 per cent.), died from peritonitis.

¹C. Arnd (Berne.) *Deutsche Zeitschrift für Chirurgie*, Bd. x.vii, Hft., 1 and 2.

Without doubt these wounds should be closed by suture, and at the earliest possible moment. Kraske reports several accidents which followed this open treatment. In three of his cases the circular intestinal suture gave way, the proximal end of the intestine slipped back into the peritoneal cavity, and faecal infection occasioned a fatal peritonitis.

In nine of Kocher's cases was the peritoneum opened, and death occurred in each of the cases in which its suture was omitted. One died from suppurative peritonitis, one from delirium tremens with sepsis, and one from collapse. Only under exceptional conditions, then, should the surgeon resort to a peritoneal tamponade.

In dealing with the hemorrhage, which is always found in this vascular region, much depends on the rapidity and certainty with which the operator works. "Dry" dissection can be employed to a certain extent, but main reliance must be placed on the scissors and knife. When possible, vessels may be doubly ligated before division; yet rapid clamping and quick ligation will achieve completion with the least possible loss of blood.

In considering the question of intestinal suture one must always remember that failure will follow here more frequently than in regions where the faecal masses are less firm and the muscular contraction less active. Preliminary colotomy, commended by Schede and others, offers many advantages in diverting the faecal flow, securing quiet and freedom from distension.

The form of suture and its material will be governed by the individual preference of the operator, and will be adapted to the case under consideration.

As with all operations the mortality statistics are of little value. They differ with different operators, they vary with the various forms of operation adopted and with the seat and extent of the disease. It is worthy of mention, however, that a mean immediate mortality of 12.17 per cent. attends a total of 230 cases of rectum carcinoma subjected to radical procedure. Of the causes of death we call particular attention to but one, iodoform intoxication. Two fatalities are attributable to this out of Kocher's thirty-five cases.

Moreover König and Krönlein have reported two fatal results directly attributable to this dangerous drug. "That should suffice," says Arnd, "to caution one against the too free use of this powder. Would it not be safer and better to avoid it altogether?" Stierlin's warning regarding personal idiosyncrasy in the matter of susceptibility to "iodoformism" does not seem to be heeded as it deserves.

A. cannot share the exceedingly optimistic views of Bardenheuer and Stierlin regarding the future mortality attendant upon these operations. He feels, however, that despite the widened employment of radical attempts the mortality will surely decrease, thanks to a more certain care in the matter of bleeding, depressing antiseptics and attention to after treatment. Concerning the chief point in all malignant conditions, recurrence, we have no very certain data to guide us. Of ninety-eight collective cases 24.5 per cent. are said to have achieved a radical healing.

Koehler's integral statistics, however, present better results, and of these the most favorable were those in which the posterior incision was employed. If we may be guided by Arnd's conclusions we may believe that the so-called Kraske operation—be it with or without excision of a part of the sacrum—offers the greatest security against recurrence; and in this connection we may call especial attention to the astonishing fact that of twelve of Koehler's patients who survived this procedure—out of a total of seventeen operations, all of the cases histologically confirmed—nine, or no less than seventy-five per cent., were said to have been radically cured and were alive, free from recurrence, when examined four to sixteen years after operation.

CHARLES A. POWERS.

LANDERER ON THE TREATMENT OF FRACTURES.

"That in the treatment of recent, simple fractures constant efforts should be made toward devising means for reducing the length of time of treatment and returning the patient to his labor, functionally capable, on the earliest possible day, all must fully admit. When, then, a surgeon of Landerer's repute sets forth procedures which he

¹Prof. H. Landerer, Leipzig. Saml. Klin. Vorträge. No. 19. 1891.

avers capable of accomplishing such advance he demands for such the most careful attention.

In the pamphlet under consideration L. lays down the broad proposition that early, permanent removal of confining dressings, together with passive or active motion, and systematic, intelligently applied massage, tend to such result.

Before considering in detail the various steps and proofs of this important allegation one may with pleasure note the author's disapproval of the employment of embrocations or ice in the early stage "They belong," says he "to a bygone age—they can have no beneficial effect; away with them! The surgeon's first duty is to make an immediate and absolute reduction and to at once apply a suitable, well-fitting apparatus which will maintain correct position." All surgeons will agree that only exceptional cases will be found in which this rule will not apply.

Turning for example, to a simple Potts fracture, we find that at the earliest possible moment after the receipt of the injury the limb is placed in a suitable position with adduction of the foot, and a moderately padded plaster splint is applied. Under this, pain, muscular contractions and other discomforts abate at the end of twenty-four to thirty-six hours.

On the fourth or fifth day the splint is removed, good position of fragments and foot assured, and another plaster dressing applied, this time rather more snugly. The patient is now allowed to go about on crutches. On the tenth or twelfth day the splint is "spring off," and systematic massage, with cautiously made passive movements instituted. These are carried out twice daily. On the thirteenth day the patient is allowed to place foot to ground, first with the dressing, then without, still on crutches. If no contra-indications exist,—old age, constitutional anomalies, etc., which would tend to hinder the ossification of the callus, the patient may be allowed to go about with two canes on the fourteenth day, with one cane on the seventeenth or eighteenth day, and he may dispense with this at the beginning of the fourth week. "Here," says L., "the soft parts receive the same attention

as the bony, the ossification is hastened through the local hyperæmia, and œdema is removed."

In the case of a Colles' fracture, after immediate absolute reduction, short flexible splints are moulded to the limb. These do not confine the fingers, active motion in which is encouraged. They are curtailed on the fourth day, and entirely dispensed with on the eighth day, after which time the limb is simply subjected to massage. After fourteen days the patients are able to do light work. The author does not employ plaster of Paris in Colles' fractures, saying with right that he cannot be as certain of the maintenance of reduction when using it.

In fractures of the patella L. follows Tilanus and Von Wagner in relying chiefly on massage of the quadriceps, the fragments being drawn together by plasters and the limb resting in a simple splint. At the end of the third week or the beginning of the fourth the patients begin to walk, and are said to be functionally capable, in many cases, in the fourth or fifth week. The author justly deprecates the conventional employment of any form of suture. Fractures of the neck of the femur or of the upper part of the humerus are treated in the same way, passive motion being commenced at a later date in the impacted than in the non-impacted cases. So, as well, with fractures of the leg; these are subjected to massage at the end of the third week, while one week later the patients are allowed to begin to walk. As a matter of course other plans are adopted when the lesions are very oblique.

Fractures of the thigh are treated in the usual way with extension apparatus, massage being begun in the fourth week. In the fifth or sixth week the dressings are discarded, the patient keeping his bed a week or two longer.

When the author commends the employment of very early passive motion in such lesions as the multiple fractures at the lower end of the humerus we cannot feel that he will command the support of American surgeons, who are now, as a rule, very fully in favor of the principle of rest. We may easily believe him, however, when he says that massage is of much value in cases of delayed union. It is to be regretted that we are denied access to the histories of L.'s cases

or to the only satisfactory testimony, viz., final results, with elapsed time and individual details. His clearly stated propositions, are however, of much interest, and the publication will repay careful study.

CHARLES A. POWERS.

LUCAS-CHAMPIONIERRE ON THE RADICAL CURE OF NON-STRANGULATED HERNIA IN WOMEN.

In a paper read before the Congress for the Advancement of Science at Marseilles, September, 1891, Dr. Lucas-Championierre stated that out of two hundred and fifty-five cases operated upon for the radical cure of hernia thirty-nine were women. Of these eleven had umbilical, seventeen inguinal and eleven crural hernia; all gave satisfactory results.

The application of a truss in women is of little use, and even in umbilical hernias eighteen out of twenty are valueless even when they are comfortable to the patient. In young subjects, where a cure has apparently resulted from the application of a truss, the first pregnancy often causes a relapse. The immediate dangers from hernia are chiefly those attributable to pregnancy and child-birth. Although strangulation seldom occurs at this time, the hernia is usually increased. The secondary dangers are more formidable. The hernia is likely to be painful, irreducible and progressive. The organic changes in women are greater, more rapid and more serious than in men.

Operation should always be undertaken while the patients are still young, although very good results have been obtained after the menopause. Delays only expose the patient to useless dangers and lessen the value of the undertaking. The occupations of women are favorable to the continuance of the cure, and pregnancy following laparotomy has been proven not to be a serious complication.

Operation should not be undertaken during the menstrual period. Complete baths before the operation are not essential to success, and as they increase the liability to cold they are not advocated.

Umbilical hernia is rare among infants and young girls, but appears among young women at the time of childbirth, and increases the fatality of this period. It is almost impossible to keep it reduced,

it causes constant suffering from the omental adhesions, and renders the woman incapable of much exercise, so that she becomes obese, and her general condition changes as much as the local state. Diabetes is exceedingly common, and strangulation is a constant menace. The essentials to a complete cure are, first, the destruction of the whole sac; second, the complete reduction or ablation of the parts involved; third, the careful and firm reinnion of the peritoneum and abdominal walls. The incision should be vertical, but may vary with the form of the hernia. In opening the hernial sac care must be taken not to open the intestine, which is liable to occur in consequence of the thinness of the membrane and the firm adhesions. The removal of the omentum is sometimes difficult, but by proceeding slowly and tying it off in small portions no mistake need be made. Sometimes it is necessary to pass a ligature about that portion of the omentum not directly involved in the hernia, and enough should be removed to prevent a recurrence. The dissection of the sac from the outer walls is easy, but in the neighborhood of the ring care must be taken not to enter the peritoneal cavity. The walls of the sac should be united by two crossed or by a continuous catgut suture. The margins of the wound are then closed by catgut, and sometimes a second and occasionally a third row of sutures are employed. Considerable redundant skin may be removed at times. Drainage should be employed. After the operation a belt with a small plush cushion should be worn. Ten of the cases in this class were true umbilical hernia, and one was epigastric.

Inguinal hernias in women are usually small, but painful. Some of those operated upon, however, were very large, one reaching to the knee. These hernias are considered congenital. In all cases the round ligament plays an important role. In some the ovary and Fallopian tube are more or less involved, and this proves the congenital origin of the trouble. In nearly all cases the round ligament forms a part of the sac, for at this point the membrane is so thin that it is impossible to detach it. It is readily understood, therefore, why this hernia, having such close relations with the internal genital organs, is the seat of sharp and often continuous pain, which in itself would be

an indication for operation. If the ovaries are diseased or adherent they should be removed, and the round ligament should always be cut off. Thus we are certain of the removal of one cause of the pain and of a more favorable condition for a radical cure than could be obtained by any other operation. There is no opening left in the abdominal wall, and the canal can be completely closed by sutures. The resection of the round ligament has no drawbacks, and leaves no troublesome results. These patients have been seen or heard from occasionally, and the results continue satisfactory. In the younger cases it is impossible to find any traces of the hernia except the cicatrix, and the pain has disappeared in all. One of the cases, a woman of fifty years, two months after her operation was killed accidentally, and at the autopsy the canal and the hernial cul-de-sac were found to have completely disappeared.

Crural hernia among women is also usually painful, especially when it is composed of omentum with close adhesions. In operating two distinct portions of the hernia are recognized, that which is in front of the cribriform fascia and that which is behind it. If only that portion in front is operated upon the result will be unsatisfactory. The fibrous ring must be freely split up and the dissection carried well beyond it in order to dispose of the cul-de-sac, which otherwise will threaten a recurrence of the hernia. It is also necessary in order to break up the adhesions that usually extend well beyond the ring; unless this is done there is no diminution of the pain. The completion of this operation is sometimes difficult and dangerous unless sufficient care is exercised in consequence of the proximity of the large vessels of the thigh. The neck of the sac should be carefully closed by crossed catgut sutures and the hernial canal by deep sutures. The results are very satisfactory, the pain disappears and there is little danger of a relapse.

SAMUEL LLOYD.

KORTE ON THE SURGERY OF THE GALL-PASSAGES AND THE LIVER.¹

This is a study and review of the subject, based on twenty-two new cases. These he divides into five classes—affections of the gall-pas-

¹W. Korte, *Saml. klin. Vorträge*, 1892, No. 40.

sages, liver abscess, subphrenic abscess, echinococci of the liver, and hepatic injuries.

1. Affections of the gall-passages. Here the formation of gall-stones is the most frequent indication for surgical interference. Not the gall-stone formation of itself, but its sequelae call, when internal remedies fail, for operative treatment. Here medicine and surgery do not compete but complement each other.

The indications for operation he formulates as follows :

(1.) Very frequently recurring gallstone colics which do not yield to internal means. This indication is relative, the individual conditions having to be considered.

(2.) Lasting retention-tumors of the gall-bladder that remain after the attacks. Here the existence of a large concretion is to be presumed, capable of producing evil consequences. As the onset of such results cannot be foreseen, our help by delaying may be too late, and even simple retention tumors cause trouble, especially to those engaged in manual labor. He holds that in these cases operative interference is as a rule indicated. Naturally one would wait where such swellings cause no symptoms and no inconvenience to the patient. Permission also would hardly be granted.

(3.) If after the colics have subsided the gall-bladder remains sensitive and enlarged an inflammatory process in and about the bladder is to be assumed, depending presumably on the presence of concretions and commencing ulcerations ; hence, after unsuccessful internal treatment an operation is indicated.

(4.) Where fever, pain and swelling point to a suppurative process, the operation should not be delayed.

(5.) Symptoms of closure of the bile duct, if internal medication fails, demand the operation.

Clinical experience is necessary for correct diagnosis, and various differential points are considered.

He has operated in twelve cases of cholelithiasis—eleven females and one male, although two other males withdrew without operation. All the women had borne children. In three cases the choledochic duct was blocked by calculi, in others there was dropsy or empyema

of the gall-bladder. Three of these cases died, though neither as a result of the operation. The others, in part after repeated operations, were discharged with normally acting biliary apparatus.

Cholecystotomy was performed seven times, once for dropsy of the gall-bladder from stone, four for empyema of the organ, twice for closure of the choledochus as a preliminary operation for cholæmia—only the last two at two sittings. Operation in two acts—separated by some days for the formation of adhesions—he would limit to the less frequent cases where the bladder-wall is so shrunken or so friable that it cannot be securely sewed to the opening. Three of these patients died. In two the gall-fistula was closed later, in one this occurred spontaneously, and in one it was immediately closed after construction of a vesico-intestinal communication.

Cholecystotomy he holds to be the most suitable procedure in empyema of the organ, in disease of its wall, and further in choledochic closure to avoid cholæmia by securing a necessary exit for the bile.

Where there is simply a formation of stone without disease of the wall, but with permeability of the choledochus, he prefers incision of the viscus, discharge of its contents and subsequent suturing of the bladder incision—so-called “ideal cholecystomy.” This was done five times. He prefers the transverse incisions parallel to the costal border. With the finger in the abdomen he then palpates the bladder and its discharge duct and frees interfering adhesions. The bladder is then drawn well out and plugged around by prepared gauze. Aspiratory puncture shows the nature of the contents; if not purulent the bladder is then incised, the patient lying over towards the right side. Contained concretions are generally floated out easily or withdrawn with the scoop. Stones in the duct (cystic) may be more difficult to remove. In one case he had to pass his fingers into the abdomen and press the stone out from beneath. The opportunity to do this is one advantage of this method. He has never succeeded in passing a probe through the cystic duct into the choledochic, although attempted in each case. Hence, as permeability of the latter is a necessary condition for this operation, this must be established by previous examina-

tion of the bowel passages and by palpation of the duct at the operation. After emptying the bladder it is washed out with some mild fluid like boro-salicylic solution and then sewed up with a double row of sutures—one for its own wall and one for the overlying peritoneum. The omentum can be advantageously drawn over the line of suture and fastened by one or two sutures. K. no longer in such cases attaches the bladder to the external peritoneal wound. The wound of the gall-bladder healed promptly four times and once caused a temporary fistula.

Extirpations of the gall-bladder he has not practiced, and cites reasons in opposition to the procedure unless the structure is the seat of malignant disease.

The severest biliary troubles come from closure of the common duct. When this is caused by strictures or tumors, or where the duct cannot be sufficiently exposed, then cholecystenterostomy is the proper operation. In two attempted cases this could not be accomplished, but in a third it was successful—even for the patient. Here he chose the duodenum (cholecystoduodenostomy) as was once previously done by Terrier.

2. Liver abscesses. In Germany this is most frequently caused by biliary calculi. One of K.'s two operated cases was of this origin, the other from perityphlitis—the latter cured. The bacterium coli commune was found in two cases of hepatic abscess and once in the gall-bladder.

3. Subphrenic abscess. 7 cases; 5 after perityphlitis, 1 from gall-stones, once following an old pyelonephritis. In 1 case he opened from the back below the 12th rib, following along the diaphragm until the pus was reached; in 3 he took the other admissible way, resecting a rib in the axillary line and usually the eighth, then going through the pleura and opening at the apex of the diaphragm. Of these 7 cases 6 recovered, the fatal one, however, being cured so far as this abscess was concerned, but dying of primary nephritis and erysipelas.

4. Liver-echinococci, 3 cases, all operated at single sittings; 2 recoveries,—1 death four weeks after operating.

5. Injuries to the liver, 4 cases. Two shot-wounds recovered after laparotomy—in the one case permitting ligation of bleeding vessels in the liver and adjacent bands. The other two cases were fatal from complications.

WILLIAM BROWNING.

INDEX OF SURGICAL PROGRESS.

GENERAL SURGERY.

I. The Cure of Anthrax by Excision of the Pustule.
By T. PAGAN LOWE, M. R. C. S. (Bath, England). The author's experience is limited to two cases: (1) A man, aged 38, on the seventh day of the disease, presented on the right of the neck, about the middle of the posterior triangle, a large malignant pustule, consisting of a central dark-brown eschar surrounded by a zone of flattened vesicles, outside of which was an inflammatory zone, the whole of the right side of the neck being enormously swollen and cedematous. The treatment adopted was excision of the pustule in an elliptical mass, including the entire area of vesiculation, together with a considerable portion of healthy skin on each side and the deep tissues beneath, so as to insure complete eradication. The wound was freely irrigated with hot perchloride solution and well dusted with iodoform before its margins were brought together by sutures.

(2) The wife of the first patient, aged 40, who had assisted in dressing her husband's wound, was attacked two weeks later, the pustule developing on the cheek. On the fourth day the pustule was excised and its base freely cauterized, after which rapid convalescence ensued.

In both cases the disease was inoculated by the finger nail, the husband having scratched his neck after washing some buffalo hide, and the wife her cheek after dressing his wound.

The author remarks that the bacilli of anthrax are known to have a marked preference for the superficial layers of the dermis, slowly penetrating into the deeper parts; and these cases suggest that when anthrax attacks the skin it may remain local for a considerable length of time and produce a mild affection as compared with the same disease when attacking internal organs.—*London Lancet*, Jan. 23, 1892.

JAMES E. PILCHER (U. S. Army).

II. On Facial Paralysis in Tetanus Hydrophobicus. By DR. PAUL KLEMM, of Dorpat. Since Rose, in 1870, pictured the special phenomena of tetanus following cranial wounds—to which he gave the name “Tetanus hydrophobicus,” or “Head tetanus”—a considerable number of cases have been reported and carefully studied. In the work before us Klemm groups these cases, analyzing them and differentiating two forms: 1. Those in which tetanus follows a wound in the region supplied by the cranial nerves, the muscles in the immediate vicinity of the wound being first involved and the process gradually spreading thence, and 2. Cases in which plain evidences of facial paralysis are present in addition to the tetanic contractions of the facial muscles.

Ætiologically Klemm believes the paralysis to be a toxic one. Brieger has shown that the tetanus virus is composed of a number of alkaloids possessing different properties. The tetanotoxin has paralyzing characteristics. According, then, to the prevalence of one or other of the alkaloids, the facial paralysis may be of high grade, of low intensity, or quite absent.

So, in the 20 cases cited by Klemm, in the most intensive the paralysis was complete, in others only those branches in the vicinity of the wound were affected, while in still others the disease took the form of ordinary tetanus without evident paralysis of any of the muscles supplied by the facial.

In this connection we may state that the statistics of the civil war in America show 21 cases in which tetanus followed wounds of the head, and in none of these was paralysis of the *nervus facialis* observed.

Deutsche Zeitsch. für Chis. Bd. 32, I. 283

CHARLES A. POWERS (New York.)

HEAD AND NECK.

I. A new method of Intracranial Neurectomy of the Second and Third Divisions of the Fifth Nerve. By F. HARTLEY, M. D. (New York). In the case of a male, aged 46 years, who suffered from intractable neuralgia of the second and third branches of the left trifacial nerve, for which by previous operations

only temporary relief had been obtained, Dr. Hartley devised and performed the following operation for division of the affected branches within the cranium :—

The operation intended was to attack the nerve on the inner surface of the skull outside the dura mater, to isolate the second and third branches completely, to divide and resect as long a portion as possible. The advantages thought to exist in this method over Pancoast's or its modifications by Krönlein, Credé, and Salzer, or Lüké's operation, were the easy access to the nerve, the comparatively large field for work, the rapidity with which the operation could be done, and the small amount of hemorrhage. The disadvantage was the inability to resect as long a piece as could be done in some of the other methods. This disadvantage can be overcome in the future when the knowledge of the degree of adhesion of the fifth nerve and dura mater is better appreciated. It is not difficult to go beyond the Gasserian ganglion.

An omega-shaped incision was made, having its base at the zygoma and measuring a distance marked by a line drawn from the external angular process of the frontal bone to the tragus of the ear.

The curved and rounded portion of this incision reached as high as the supratemporal ridge, the diameter of said circle being three inches. The skin and deeper tissues were cut in the shape of the Greek capital letter omega. This incision was carried down to the periosteum of the skull in all portions of the incision, except in the straight part at the base; the tissues were then retracted and the periosteum divided upon the bone in the same direction and as far as the straight part at the base.

With a chisel a groove was cut in the bone corresponding to the divided periosteum. This groove went to the vitreous plate, except at the upper angle over the rounded portion where it included the vitreous plate.

A periosteum elevator was here inserted and used as a lever to snap the bone on a line between the ends of the circular portion of the incision. In this way the breakage occurs along the lower portion of the wound, and a flap, consisting of skin, muscle, periosteum, and

bone is thrown down, exposing the dura mater over a circular area of three inches in diameter. The middle meningeal artery was then tied, the dura mater was then separated from the bone, and the floor of the middle fossa of the skull was exposed. Broad retractors were used to raise the dura mater with the brain and to expose the foramen rotundum and the foramen ovale. The hemorrhage was stopped by sponge pressure. The exposure of the first, second, and third divisions of the fifth nerve, together with the carotid artery and cavernous sinus, was exceedingly good.

The second and third divisions were isolated at the foramen rotundum and the foramen ovale, and, by slight pressure upon the dura mater, it could be stripped from the nerves to beyond the Gasserian ganglion. These are divided with a tenotome at the foramen rotundum and the foramen ovale, and that part between these and a point beyond the Gasserian ganglion was excised. As this amount of nerve is not very great, the ends of the nerves were pushed through the two foramina so as, if possible, to interfere with any reunion. In the retraction of the dura mater, owing to imperfect instruments, the third, fourth, and sixth nerves were somewhat injured. As no bleeding was present, the brain was allowed to fill the fossa. The flap—consisting of bone, periosteum, muscle, and skin—was replaced. The irregular edge of the vitreous plate which remained attached to the bone not involved in the flap acted as a shelf on which the flap rested and prevented its falling in upon the dura mater. The periosteum was stitched, the muscle sutured in place, and the skin sewn with silk. One drainage tube was inserted at the lower angle; an antiseptic dressing was applied. Time of operation, one hour and forty minutes; the patient was carried to the ward in good condition. Following the operation, August 16th, ptosis of the left upper lid appeared, together with double vision and inability to move the eye.

At the end of six weeks the patient recovered from his paresis in the third nerve; the double vision, ptosis, and inability to use the third nerve have entirely disappeared. The paralysis of the pterygoids, temporal, and masseter muscles produced by the division of the motor portion of the fifth seems to have incommoded him to a very

slight extent. The false teeth worn in the lower jaw before the operation fit quite accurately their opponents in the upper. Protraction and retraction of the lower jaw seem to be diminished, but elevation and depression of the lower jaw seem good. As the patient has chewed since 1882 all his food on the side opposite to the present paralysis, he has not been distressed by the division of the motor portion of the fifth.

At the end of six months the patient remains entirely free from pain and has gained much in weight.—*New York Medical Journal*, March 19, 1892.

II. Œsophagotomy for Impacted Foreign Bodies. By ARPAD G. GERSTER, M. D., (New York). If a foreign body becomes lodged in the Œsophagus and cannot be displaced downward into the stomach or extracted without the employment of much force, it is imperative to perform external Œsophagotomy at once. With the exception of cases in which a goitre or cervical tumor impedes the otherwise simple steps of the operation, the procedure as now practiced is comparatively safe, its rate of mortality for all cases, recent and old, good and bad, being computed by Fisher as twenty per cent. The conditions are parallel to those existing in strangulated hernia. *An early operation is safe; a late one dangerous and very often useless.* Delay extending over twenty-four hours is never justified, and if at the end of this period extraction by bloodless processes is not easy, the gullet ought to be cut at once.

Tedious and often-repeated attempts at dislodgment in a case where impaction has been present for more than twenty-four hours are apt to be more dangerous than Œsophagotomy. The patient's general condition is usually bad from fever and starvation, and the depressing effects of the manipulations in the fauces and Œsophagus, productive of nausea and vomiting, are not to be slighted. Finally, the further injuring of the mucous membrane in the presence of septic ulcerative processes or sloughing, and the probability of causing *traumatic* perforation, are to be well weighed.

As regards the technique of Œsophagotomy, the following points have to be observed: The incision should be ample, to permit com-

portable operating without the employment of much traction and bruising of the organs exposed. Blunt methods of division are to be shunned, as torn tissues are not so viable as cut ones, and are apt to succumb very easily to septic influences that may proceed from an ulcerating or sloughing œsophagus. The incision should be just in front of and parallel with the anterior border of the left sterno-mastoid muscle, beginning a little below the level of the cricoid cartilage and extending to the sternal insertion of the muscle. The omo-hyoid is drawn aside, and the lateral margin of the thyroid gland is exposed to serve as a guide. The large vessels should remain undisturbed within their common sheath, and are to be drawn backward and aside, together with the sterno-mastoid. Dissection should proceed between two mouse-tooth forceps. Thus vessels crossing the tract of the incision can be recognized and secured before being cut. Should the sternal portion of the sterno-mastoid be in the way, it may be cut also. The recurrent nerve must not be injured. The œsophagus can be recognized by the longitudinal direction of its fibers, or, if this is difficult, by protrusion practiced with a metallic catheter or urethral sound from within. It is incised between two small, sharp retractors, and fillets of silk are passed through the edges of the cut, by which manipulations within the viscus are made much easier. In the absence of septic complications—and this may be fairly expected in cases receiving early attention—the edges of the œsophageal wound should be stitched at once with fine silk. The outer wound is to be packed loosely with iodoform gauze. A few silkworm-gut stitches may be inserted into the cutaneous edges of the wound, which however, is to be closed only after the removal of the packing. In these cases alimentation by the mouth can be commenced at once with liquid substances, and the patient should swallow very small quantities and while lying on the right side. Minute leakage will often occur, but will not interfere with the rapid healing of the wound. In those cases where ulceration or sloughing has occurred, suture is often impracticable and rarely safe. The open method by packing is in order, and large defects may necessitate the use of the stomach-tube, which can be inserted through the wound or by the mouth or nares.—*New York Med. Jour.*, Feb. 6, 1892.

ABDOMEN.

I. Intestinal Anastomosis and Suturing. By R. ABBE (New York). The author does not attach much importance to the use of any of the artificial aids recently devised to accelerate the operation. The accidents may occur of having leakage, or suppuration, or hemorrhage, or obstruction from plates, or irritation of the canal from so considerable a foreign body. The question of time gained during what is usually a prolonged operation, perhaps at most five or ten minutes, in the face of the uncertain advantage of bone plates, etc., is one that in his opinion is greatly outweighed by the superior advantage of having absolute security against leakage, blocking, etc., by the method of simple suturing, the technique of which is easier performed and gives better results than attend any of the new methods.

There is one feature of the operation of anastomosis which has heretofore received no special attention, but which he believes to be of the very greatest moment in determining the lasting benefit of the operation, that is, the question of stenosis of the newly made orifice. The law of cicatricial contraction, that operates so effectually in closing accidentally made fistulæ into the intestinal tract, or comparatively large ulcerations between the gall-bladder and the intestines, is here the direct antagonist of the surgeon in his endeavor to create a permanent and adequate anastomotic opening. The incised opening made for the use of Senn's plates is about one inch and a half in length, and the contraction of such an opening sometimes with great rapidity has in some cases rendered it entirely inadequate to its service. Not many autopsies remote from the date of operation are as yet recorded. Three of the author's cases of lateral anastomosis illustrate the subject admirably. In the first, done in 1888, between the ascending and transverse colon, Senn's plates were used. The patient dying six months after operation, the aperture, which was one inch and a half in length, had contracted to three-fourths of an inch, and was sufficient for its purpose only when laxative medicine was constantly given. In the second case, the patient dying six months after anastomosis, with catgut rings, the opening had con-

tracted from one inch and a half down to a half-inch. In the third case, eight months after lateral anastomosis of the sigmoid by suturing, the aperture contracted from three inches to one and a half. This was perfectly competent to do the functional work of the bowel.

These results were relatively good, but not so perfect as that which so far has been brilliantly demonstrated in two other cases where lateral anastomosis by suturing around a four-inch opening was done with instant and absolute functional restoration.

A. believes the future utility of lateral anastomosis lies in making openings four inches in length in the sides of adjacent bowel. This is almost impossible with bone plates, and only to be done by very long catgut rings or vegetable plates, with less security and as much consumption of time as by suturing. The contrast is enormous between dropping back into the abdominal cavity a beautifully sutured, absolutely tight and flexible anastomosed end of intestine to any position in the abdomen which its natural surroundings demand, and the returning a huge bunch of bowel, inside which there is a pair of five-inch plates of bone or raw potato, to remain as irritating foreign bodies stimulating peristalsis, and tugging at the wound until they are softened enough to be swept on by the current, or, as in one of Senn's cases, to be vomited up after dangerous retching.

As regards time, even were it proved that a hand equally expert at each method could do that by plates a few minutes quicker, the relative advantage of the two procedures for safety still lies with suturing.

A. strongly advocates in cases of great fecal accumulation the uniform practice of first creating an artificial anus and allowing the escape of the feces for some days before doing the anastomosis. He now believes that the perfect technique of suturing consists in the following method:

Bring the two surfaces that it is proposed to unite well up into the wound, and surround them by small compresses wring out of hot water. Have at hand a half dozen fine cambric needles threaded with ordinary finest black silk that has been well boiled and kept in alcohol. Cut in lengths of not more than twenty-four inches, and

tie with a single knot at the eye of the needle, with one end cut to within two inches. Apply two parallel rows of continuous Lembert suture, a quarter of an inch apart, and an inch longer than the proposed cut. Leave each thread with its needle attached at the end of its row. Now open the bowel by scissors, cutting a quarter of an inch from the sutures, both rows of which are to remain on one side of the cut. Make the bowel opening four inches long. Apply clamps temporarily to several bleeding points, pinching the entire thickness of the cut edge without hesitation. Apply no ligatures. Treat the opposing bowel in the same manner. The clamps remaining *in situ*, the parts are quickly rinsed with water. Another silk suture is now started at one corner of the openings and unites by a quick overhand the two cut edges lying next the first rows of sutures. The needle pierces both mucous and serous coats, and thus secures the bleeding vessels, from which the clamps are removed as the needle reaches them. This suturing is then continued round each free edge in turn, and all bleeding points are thus secured more quickly than by ligature. The serous surfaces around these button-holes are then rapidly secured by a continuation of the sutures first applied, the same threads being used, the one nearest the cut edge first. The united parts are again rinsed with water and dropped into the abdomen.

His conclusions are summarized as follows: 1. That the attempt to simplify the technique of lateral anastomosis by bone plates and other devices has not improved it. 2. That lateral anastomosis properly done is eminently the safest and best method of restoring the canal in most cases. 3. That simple and thorough suturing with a fine silk continuous suture, applied after the manner detailed, is most satisfactory. 4. That in order to allow for the inevitable tendency to stenosis an aperture four inches long should be made between bowels. 5. That scarifying opposing surfaces is entirely unnecessary to quick and solid repair.—*Medical Record*, April 2, 1892.

II. On resection of Intestine. By Dr. P. SACHS (Berne).
After a short glance at the history of the operation and a review of the

earlier cases S. reports *in extenso* thirty-five from the clinic of Prof. Kocher, with a mortality of 54.6 per cent.; twenty-five were resected on account of gangrenous hernia, with 60 per cent. mortality; in seven cases a preternatural anus of long standing occasioned operation, of which cases 42.8 per cent. were fatal. Seven of the first set presented Littre's hernia, and in these 71.4 per cent went on to healing.

In comparison with those cases of gangrenous hernia treated by resection may be placed seven cases in which Kocher made an artificial anus; but once with success, and with a consequent mortality of 85.7 per cent., as against 60 per cent. in the resections with immediate suture or with early secondary suture.

Cases which are to be subjected to the ideal procedure are to be carefully selected, avoiding those in collapse, those with peritonitis and those in which approximate perfection in technique is impossible. We cannot think the presentation of mortality lists regarding form of antisepsis, suture material, etc., of much value unless compiled from a large number of cases presenting similar conditions.—*Deutsche Zeitsch. für Chirurg.* 1891, Bd. 32, Heft. 1 and 2.

III. A Case of Dermoid Tumor of the Navel. By Dr. PAUL GUETERBOCK, of Berlin. While dermoid tumors of the superficial layers of the abdominal wall may occur at any portion of it, those penetrating deeply seem to have been observed only at the navel. Quite a parallel case to that of Duplay (cited by Longuet, *Traité élémentaire de pathologie externe*, vi. p. 818) is the following:

A 16-year old boy sought treatment for an abdominal swelling which he was said to have first noticed two weeks previously, it having considerably increased in size during the last week. The tumor was the size of a child's head, roundish, nodular at places, painless and movable. It occupied the mid-line between the ensiform cartilage and the navel, embracing the latter. Skin partly adherent, abdominal contents thought to be adherent also. During the next few days the tumor became inflamed, fever set in. Incision revealed a large irregular cavity having a membrane containing thin pus and masses of cheesy material. Thorough scraping, disinfection, healing.

Examination revealed the lower organized epidermoidal structures, cholesterol, fat crystals, epithelium, etc.—*Deutsche Zeitsch. für Chir.* Bd. 32, Heft 3 and 4.

IV. A Report on 200 Herniotomies. By Dr. RUDOLPH HAUS, (of Magdeburg). A statistical paper detailing histories of the cases of herniotomy in Hagedorn's Clinic for the seven and one-half years ending with July, 1890. Of the entire number, 30 were non-incarcerated, 13 reducible, 17 irreducible—all of which recovered. The remaining 170 were incarcerated, of these 29—17 per cent. of the latter number—being fatal.

In all cases in which no contraindication existed an attempt at radical cure was made after the ordinary manner of Czevny, or this slightly modified. In general the wound was sutured, drains being omitted. In a few cases, however, tamponade was used, this with the intention of preventing collection of secretion.

Hagedorn seems to have been somewhat conservative in recommending operation in non-incarcerated cases, reserving it for those in which the hernia was of large size, painful, or in patients who had already suffered attacks of incarceration.

Childhood was not looked upon as a contra indication, the operation being carried out four times on children who presented very large herniæ. Of the 170 incarcerated cases, 66 were inguinal, 96 crural, 1 obturator, 3 umbilical, and 4 ventral. Among the inguinal cases worthy of special note may be mentioned two in which the processus vermiformis was found to be adherent to the sac. Again, he noted among the femoral herniæ one case in which a diverticulum of the urinary bladder was found behind the sac, as well as one in which the right Fallopian tube formed part of the contents of the hernia.

Primary section of intestine and circular enterorrhaphy were adopted in sixteen cases, with nine deaths. Indications thereto was found in necrosis of such area that it could not be closed in by Lembert's suture. Continuous suture of the mucosa was followed by Lembert's suture of the serosâ, the latter also continuous. Catgut was used in all cases, quick absorption not being feared, since good union was to be expected at the end of twenty-four hours.

Although the individual histories of the cases narrated by Habs are of much interest, and will repay careful perusal, it is greatly to be regretted that the author omits mention of one of the most important points, viz., recurrence of the herniæ. This has been shown by Bull, of New York, to be very frequent after all forms of procedure, and the large number of cases reported by H.—169 recoveries—would, had they been carefully examined regarding ultimate results, have afforded valuable statistics.—*Deutsche Zeitsch. für Chir. Bd. 32 Heft 384, 1891.*

CHARLES A. POWERS (New York).

GENITO-URINARY ORGANS.

I. Perineal Drainage in Inveterate Stricture of the Penile Part of the Urethra. By C. MANSELL-MOULIN, F. R. C. S. (London). Observing that in other parts of the body, the absorption of the products of chronic inflammation begins as soon as the irritation that gave rise to it ceases to act, the author could see no reason why if strictures could be placed under the same conditions, the same result would not follow—at least in those cases in which there has been no destruction of the mucous membrane. That this was the fact was first observed in cases of extravasation of urine, where strictures of the urethra sometimes disappear spontaneously. In one case where retention had been followed by rupture and extravasation, and the patient's life was despaired of, perineal section was followed by relief to the general symptoms and improvement in general health, while, in the sixth week after, a number two English bougie passed through the urethra almost without effort, and daily catheterism for a week entirely removed what remained of the stricture. In such a case as this spasm and congestion might have had some influence, but the real change was in the dense gristly mass that surrounded the urethra and filled up all the interstices in and around the submucous tissue; left for six weeks in absolute quiet and without irritation, it had undergone a process of degeneration and absorption, so that the passage of the bougie readily unfolded and opened out the contracted portion of the urethra. The measure is a severe one, giving rise to considerable inconvenience for some length of time, although the author

remarks, if the patient will put up with it, he will be amply repaid in the future. It is more likely, however, to be reserved for extreme cases. —*London Lancet*, Jan. 16, 1892.

JAMES E. PILCHER (U. S. Army).

II. Tuberculosis of the Urinary Bladder and the Value of Suprapubic Cystotomy in its Treatment. By L. S. PILCHER (Brooklyn). The author details four cases of bladder tuberculosis in which suprapubic cystotomy was resorted to, with marked benefit in two of them, while in the other two no benefit resulted. In the case of a female the opening of the bladder above the pubes was a very satisfactory proceeding, as an aid to the exploration of the bladder and in the help which it gave in ascertaining its precise condition, but its after-care required prolonged confinement to the bed; and the discomforts attending the constant outflow of the urine above the pubes could only partially be overcome by the use of voluminous absorbent pads. The author doubts whether any benefit was derived from the efforts at topical medication that were made; and questions whether in any of these cases any substantial advantage is to be hoped for by attempts at special topical antitubercular treatment. The tubercular infiltration is not a superficial infection, to be arrested or diminished by the powderings, instillations, or irrigations that are available for use in the interior of the bladder. The curette and the cautery cannot be resorted to with any such degree of thoroughness as to encourage a hope that even a considerable portion of presumably infected tissue has been removed by them. The most that can be hoped for from treatment is to prevent the collection of urine in the bladder, to keep the bladder at rest, and to mollify the effects of the existing infection by relieving pain, removing *débris* and irritating secretions, preventing muscular spasm, and restraining inflammation. If this can be accomplished it may possibly be that in certain very favorable cases an indefinite arrest, even the entire recession of the tuberculosis, may take place.

The value of the suprapubic incision, therefore, does not consist so much in any opportunity which it may afford to give access to the disease itself, but rather in the superior degree in which it facilitates the accomplishment of these apparently secondary indications named.

In the male there can be no question as to the superiority of a suprapubic opening to a perineal one in carrying on the treatment of this special class of cases. In the female, however, the relations of the base of the bladder to the vagina are such as to suggest that by the formation of a generous vesico-vaginal opening an equally efficient and much more convenient outlet to the bladder would be furnished than could be had above the pubes. The author's experience in the case of the female in question would suggest to him that in a similar case again it would be better, after having made the exploration of the bladder by the suprapubic opening, to establish a free opening through its base into the vagina and then suture the suprapubic wound, relying on the vaginal outlet for the after-treatment of the case.

Perineal drainage was tried as an accessory in one man, but the pain and irritation caused by the presence of the tube in that location, its vesical end necessarily resting upon the ulcerated surface, made its withdrawal necessary after a very short time. Further experience and observation have satisfied the author that it can rarely be of any added advantage to have a perineal opening as long as the suprapubic opening remains patent and the contractility of the bladder walls has not been destroyed.

In conclusion, the author considers the two questions:

1. How early in a case of possible bladder tuberculosis is a suprapubicsection desirable.
2. How long is it desirable to maintain the suprapubic opening patent?

The answer to the first of these questions is to be found in a consideration of the indications which the operation may be accepted as subserving. It is by securing bladder rest and drainage that the operation is especially useful. The symptoms that demand attention are those usually of cystitis; if these symptoms do not readily yield to the well-known accepted constitutional and local measures of treatment, recourse to cystotomy is indicated and should not be unduly deferred while the general strength is being sapped by the local suffering, the extension of disease, and the absorption of deleterious substances into the circulation.

The second question must also receive an indefinite answer. In the most favorably affected cases a gradual subsidence of the symptoms which had called for operation may take place; the ulcers cicatrize, the inflamed mucosa resumes its normal state, the urine becomes bland and healthy, or at least comparatively unirritating, and the bladder becomes again capable of acting as a reservoir for urine, and of painlessly expelling it at suitable intervals.

When this condition has been secured the suprapubic opening may be allowed to close, but a prolonged period of time, possibly many months, must be expected to be required to bring about this end.

In other cases it is to be expected that comparative comfort only will be enjoyed as long as the bladder is not called upon to retain the urine for any time, which will necessitate the indefinite retention of the suprapubic opening and a suitable permanent drainage apparatus.

In much the larger proportion of cases, however, and especially those in which the bladder disease is secondary to or associated with progressive renal or pulmonary tuberculosis, it must be that the fatal termination of the case will early dispose of any question that might have arisen as to the permanency of the suprapubic opening, which may have been made for the purpose of temporarily alleviating the suffering caused by the condition of the bladder.—*New York Medical Journal*, March 5, 1892.

ABCESSES—TUMORS.

I. On a Case of Gas-Abscess. By DR. E. LEVY (of Strasburg.) But few cases have been recorded in which a spontaneous development of gas has taken place in a simple abscess. Lavalée and Saxinger have described such events following puerperal pyæmia, Schreiber notes a liver abscess which contained gas, and Lübke cites one in which gas was found in a suppurative knee-joint. Further, the development of gas in peritoneal exudates has been described by Breslau and Dressler, and in cysts by the latter as well as by Cantani. Velpeau, in his "*Traité des Maladies du Sein*," 1858, believed this condition when found in mammary abscesses to be explained by the proximity of the lungs; Chassaignac, however, disputed this, think-

ing the phenomena due to decomposition of the milk, occasioned by contact with the secretion from the child's mouth.

Quite recently Arloing (*Progrès Medical*, 1887), investigating a gas-containing abscess of the orbit, found a specific, gas-forming bacillus which had some of the characteristics of the vibrio septicus.

This bacillus injected in small animals was found to be capable of causing the development of gases in the subcutaneous connective tissue.

In this connection a case described by Levy is of interest. A multipara had enjoyed good health until three days after her third confinement, at which time a considerable swelling developed in the right pelvis, extending to the hip. She was bedridden for five months, at the end of which period she came under L.'s care. At this time the upper third of the thigh was much swollen, the distension involving also the right iliac fossa. The hip-joint seemed free. Deep palpation revealed evidences of gas and the cavities above and below Poupert's ligament communicated. Percussion gave tympanitic resonance. A sterilized canula withdrew gas, which was caught under quicksilver.

Ordinary incision, prompt healing.

Bacteriological investigation showed, in addition to the ordinary streptococcus pyog., colonies of bacilli somewhat similar to those of anthrax. These latter consisted of short, fine, non-moving bacilli arranged in chains and threads, slightly colored with ordinary stains, not colored by Gram's method.

As they could not be procreated, researches on animals could not be carried out.—*Deutsche Zeitsch. Für Cir.*, Bd. 32, Heft 3 and 4, 1891.

CHARLES A. POWERS (New York.)

BONES.—JOINTS.—ORTHOPÆDIC.

I. Bursal Exostosis and Its Origin. By Dr. L. W. ORLOW (St. Petersburg). Viewed from a histogenetic standpoint, two forms of exostoses are observed, those growing from cartilage tissue and those which take their origin from a non-cartilaginous connective tissue, the latter arising from the periosteum or independently of it. While all parts

of the skeleton which contain cartilage tissue can serve as the starting point of the cartilaginous exostoses, they are most frequently found at the ends of the long bones. Cases in which they are found at some distance from epiphyseal cartilage are explained through the fact that they take their origin in an earlier developmental period of the bone, and synchronously with its growth come to lie at a greater or less distance from the epiphysis.

These cartilaginous exostoses are separated from the surrounding structures by a loose connective tissue, and are covered at their free extremities by a layer of cartilage of varying degrees of thickness. This may, however, become lost in the exostoses of long standing and of large size. They are generally single, but are at times met as multiple tumors, not infrequently symmetrical, on both sides of the skeleton. In addition to these solitary and multiple forms, a third has been described under the name of exostosis bursata. Its especial characteristic is a pouch which covers the free surface of the tumor and which in general resembles a synovial membrane. The inner surface of this pouch may be either smooth or shaggy, and its cavity is filled with a fluid resembling synovia. This fluid is sometimes present in so great quantity that it forms the chief symptom of the tumor, and it is only after opening it that one finds the small, solid mass at its bottom.

These bursal exostoses are rarely met. O. is able to gather from literature only some nine authentic examples, to which he adds one seen by himself in Tilling's clinic. This latter occurred in a boy of fifteen years, who, when eleven years of age, accidentally observed a hard lump on his right thigh. This grew slowly, and when seen formed a roundish, hard, immovable tumor at the inner third of the right femur, about at the junction of the middle and lower thirds. On cutting through the vastus internus a whitish pouch was found immediately over the tumor, movable on it. On opening this sac a few drops of fluid resembling synovia flew out. In the bottom of the sac a bony tumor was seen, covered by a layer of cartilage and apparently fixed by a broad base to the surface of the femur. On chiselling it away, however, it was found that it was attached by a long and nar-

row bony pedicle to the upper surface of the internal condyle, and that a space of $\frac{1}{2}$ -1 cm. separated it from the shaft of the bone. Removal, prompt healing.

Microscopically the tumor was found to consist of large cartilage cells grouped in a structureless basement substance. The sac was made up of connective tissue with elastic fibres. Neither the cartilage nor the inner layers of the sac were clothed with epithelium. *Deutsche Zeitschrift für Chirurgie.* Bd, 31. Heft 3-4.

CHARLES A. POWERS (New York).

II. Indications for the discontinuance of the Mechanical Treatment of Hip-joint Disease. By N. M. SHAFER, M.D. (New York).—Prolonged treatment seems necessary in the majority of cases. Tubercular lesions of the joints are not easy to control, and repair takes place very slowly once the cartilage is gone and the bone is fairly attacked, or when there is a lesion at the epiphyseal line. Recognizing these points fully, we may state that if there is pain referable to the joint lesion, if manual concussion to the heel produces pain or flinching, if there is considerable deformity without ankylosis, if there is a true joint limp, or if there are abscesses or sinuses connected with the joint, we are not justified in discontinuing mechanical treatment. Or if there is reflex muscular spasm, limiting joint movement slightly in all directions; if there is almost perfect flexion of the joint, with the other movements considerably or markedly limited; if flexion and abduction and adduction are excellent, with rotation and extension limited; and, finally, if all the movements of the joint, except rotation inward during flexion, approximate the normal, there is almost a certainty that mechanical protection is necessary. Of course, it is understood that the limitation to motion above referred to is occasioned by the neuro-muscular protection peculiar to the disease. Not that it necessarily follows that an active tubercular process exists; but, if too much liberty is given the joint under the circumstances above named, ordinary use of the joint becomes a traumatism, and a relapse, especially as to deformity, is almost sure to occur. This relapse may occur in a few weeks or months, or may be in a few years.—*N. Y. Med. Journ.*, Nov. 29, 1891. 599.

III. The removal of necrotic and carious bone with hydrochloric acid and pepsin. By ROBERT T. MORRIS, M. D., (New York). Sometimes it is desirable to remove dead bone without subjecting a weak patient to a dangerous or deforming operation. Attempts have been made with some success at clearing out this bone by a process of decalcification, but there are two chief reasons why failures have resulted as a rule. In the first place, it was discovered that superficial layers of dead bone were decalcified easily enough, but the acids did not reach deeply through the mass, especially if portions were infiltrated with caseous or fatty *debris*. In the second place, cellulitis was pretty apt to develop during the course of treatment. After much experimentation I have finally adopted a method of work which seems to be complete. An opening is made through soft parts by the most direct route to the seat of dead bone, and if sinuses are present they are all led into the one large sinus if possible. The large direct sinus is kept open with antiseptic gauze and the wound allowed to remain quiet until granulations have formed.

Granulation tissue contains no lymphatics, and absorption of septic materials through it is so slow that we have a very good protection against cellulitis. The next step consists in injecting into the sinus a two- or three-per-cent. solution of hydrochloric acid in distilled water. If the patient is confined to bed the injections can be made at intervals of two hours during the day; but if it is best to keep the patient up and about the acid solution is thrown into the sinus only at bed-time. In either case the patient is to assume a position favorable for the retention of the fluid. Decalcification takes place rapidly in exposed layers of dead bone, and then comes the necessity for another and very important step in the process. At intervals of about two days an acidulated pepsin solution is thrown into the sinus (distilled water, f oz. iv; hydrochloric acid, oz. xvj; Fairchild's pepsin, oz. ss.), and this will digest out decalcified bone and caseous or fatty *debris* in about two hours, leaving clean dead bone exposed for a repetition of the procedure. The treatment is continued until the sinus closes from the bottom, showing that the dead bone is all out.

Even in distinctly tuberculous cases the sinuses will close if apparatus for immobilizing diseased parts and tonic constitutional treatment are employed, as they should be in conjunction with our efforts at removing the dead bone.

If suppuration is free in any cavity in which we are at work, it is well to make a routine practice of washing out the cavity with peroxide of hydrogen before each injection.—*New York Med. Jour.* March 19, 1892.

IV. Ecchinococcus in the Knee-Joint. By DR. GEORGE FISCHER, (Hanover.) In the cases hitherto reported in which the ecchinococci have been found in the joints, previous implication of bone has been demonstrated, the cocci having found their way to the joint from the bone. Especial interest attaches, then, to this case of F's, as no source outside of the knee could be discovered.

His patient was a man of forty-four years, who, while lifting a heavy chest, sustained its entire weight on the lower end of the thigh. He worked afterward, but on the third day noticed swelling and pain in the knee; this compelled him to cease labor on the tenth day, and on the eleventh day he entered the hospital. At this time the left knee was the seat of a fluctuating swelling, which extended above and internally. The circumference was six cm. larger than that of the fellow. The skin was not colored. After local applications for some days a small incision was made above and within the the patella, and a thin, nearly clear fluid let out, this fluid containing a number of masses of ecchinococcus hooklets. Sublimate irrigation, counter opening, drainage. Fourteen days later, the joint being still distended, long incisions were made on either side, the synovial membrane thoroughly scraped and partially excised. Further course satisfactory and unimportant.

It may be supposed that an ecchinococcus cyst had existed in the joint, or previously in one of the muscles, and that it had been broken at the time of the injury, allowing the hooklets to escape into the joint. The supposition cannot be verified, however, and the source must remain in doubt.—*Deutsche Zeitsch für Chir.* 1891, Bd. 32, Heft. 1 and 2.

CHARLES A. POWERS, (New York).

REVIEWS OF BOOKS.

TREATISE ON GYNÆCOLOGY, MEDICAL AND SURGICAL. By S. Pozzi, M. D., Surgeon to l'Hopital Lourcine-Pascal. Translated from the French, under the Supervision of and with Additions by BROOKS H. WELLS, M. D. Volume 1., with 305 wood engravings and 6 full-page plates in color. New York, William Wood & Co., 1891.

The work before us is one adapted chiefly to the use of the specialist and one well up in surgical practices, and of but little use to the general practitioner doing gynæcological work. The arrangement of the subjects is good, and but little unnecessary repetition is noticed. It does not contain a large amount of new matter, but in most subjects is up to date. The time-honored chapter on anatomy and histology is wisely omitted. But little credit or mention is given to American authors. The bibliography is very full, but the index is not complete. The chapter on antiseptics is complete, and while the extreme measures advised by some are not advocated, nothing essential is omitted. Instead of rendering tents of one sort and another aseptic, we think it would be better to abandon their use entirely, which is, we think, rapidly becoming the custom.

Chloroform seems to be preferred as an anaesthetic, and the administration of morphine and atropia hypodermically, 15 to 20 minutes previously, is commended. But little mention is made of ether; we would be glad if writers and teachers would insist on the slow administration of this anaesthetic instead of the rapid, suffocating method in vogue. Under the head of "Methods of Suture and Hæmostasis" a very complete and intelligent description is given of ligatures, sutures, forceps, drainings of the abdomen by tubes of different patterns and gauze, thereby saving a good deal of repetition in the subsequent chapters. The author's method of continuous irrigation of the vagina and uterus is considered far inferior to that of Bozeman.

The translator states, under the heading of "Methods of Gynecological Examinations," that vaginal touch should only be practiced between two antiseptic injections; we would be glad to know if he practices this in either his dispensary or private practice. In the cases mentioned of death following simple vaginal examinations, we can but think there was something grievously wrong with either the examining finger or the method employed. It is impossible for us to understand the adherence of the author and European surgeons generally to the cylindrical and bi-valve specula.

The insistence of extreme care and gentleness in the use of the uterine sound is to be commended in the highest terms, especially when we think of its promiscuous use by the general practitioner.

We cannot indorse the use of the laminary tents, or any other material that closes up the cervical canal as it dilates. If rapid dilatation is not advisable or practical the same end can be accomplished as surely, and far more safely, by the use of iodoform gauze. The danger is not that the tents cannot be made sterile, but that they close up the canal as fast as they dilate, and so prevent all drainage.

The author places great stress on metritis, giving it as a disease itself much more prominence than most writers. The classification has the merit of simplicity, and is based on the clinical study of the disorder. We think it would have been better to have made a greater distinction between the lesions of the cervix and body, and it is our opinion that diseases of the body are more often a sequence of cervical conditions. Pozzi states that Emmet has certainly exaggerated the importance of laceration of the cervix, which he styles a slight accident. In his opinion we do not agree, and venture to state that the lack of importance given to it is due to unsatisfactory therapeutic results owing to the non-appreciation of Emmet's method of repair. If, as he implies, it is but of little account, how does he look upon the frequent development of malignant disease of the cervix after neglected lacerations, as is abundantly proved by Drs. Emmet and Byrne. But in a later paragraph he acknowledges that laceration may cause metritis. We would also like to ask how it is that the uterus will be reduced from one-half to one inch in length in a short time

after proper repair of the cervix if it really has so little influence on the corpus as the author indicates.

The three chapters on metritis might well have been combined, for there are many repetitions, and while the classification is simple, it is mixed in the text. Under the treatment of this subject cervical laceration is discussed. A flap amputation of the cervix is advised whenever with cervical laceration there is also cervical catarrh. Unless the discharge can be permanently removed at the time of operation we would consider this a dangerous practice.

Schroder's operation of excision of the diseased mucous membrane, the author states, is preferable to Emmet's operation, as it restores the external os; that it restores the external os is undoubtedly true, but is this to be desired, thereby leaving the torn cervical tissues ununited within, making a pocket for the collection of discharges?

No disciple of Emmet would recognize his operation from the published cut, and we can easily understand why the statement is made that it has no advantage if done that way. Pozzi's chief reliance in combating metritis is the curette and intra-uterine medication. The plate illustrating lacerations, ulcerations and erosions of the cervix is excellent.

The views of different pathologists as to uterine fibromata are given, but little is said of the etiology, and no especial support is given to any of the advanced theories. The subject is considered thoroughly, and a fair consideration given to the different methods of treatment in carefully selected cases. A good deal of value is credited to the purely medicinal treatment. Electricity is considered fairly on its merits, and while the advantage claimed by some practitioners is not acknowledged, it is credited with good results in suitable cases, but not enough of the technique is given to enable one unfamiliar with the subject to practice it. Hysterectomy and the allied operations are most ably treated. A careful review of the different methods of operation is given and also the intra and extra-peritoneal treatment of the stump. Statistics are given to show a mortality of 4.2 per cent. in favor of the extra-peritoneal method.

The clinical picture given of malignant disease is a most perfect one, for the incipient disease as well as for the latter stages. Little time is spent considering the causes of cancer; endorsement is given to the theory of heredity, and little mention is made of cervical laceration.

In the treatment preference is given to the knife as a means of removal, when the disease does not affect the vaginal walls; however, strong preference is given to total hysterectomy, even when the disease is circumscribed. C. Braun is referred to as using the canter, but no mention is made of the work of Dr. Byrne, of Brooklyn, who we believe, has done the best work in that line. The statistics of Hofmeier and Baker on high amputation which show fifty per cent. of cures after two years are considered "truly too fine," and Pozzi states that the demonstration is almost made that the mortality of hysterectomy is not higher than that of high amputation of the cervix. The vaginal method of hysterectomy is considered the best, and the use of ligatures rather than forceps, to control hemorrhage. The description of the operation is very plain and concise and but little burdened with the usual mass of details which so often obscure the salient points. The chapter on displacements of the uterus is somewhat disappointing; here again, the great prominence which is given to metritis is shown when the statement is made that anterior displacements are caused and kept up by it. The treatment of anteversion, as it should, receives but little attention, save by the removal of the cause. No faith is placed in pessaries, and amputation of the cervix is preferred to any of the plastic operations of dissection.

In posterior displacements a distinct difference is made between flexion and version, flexions almost always happening as a result of puerperal metritis. The use of the sound is advocated to reduce a retro-displaced uterus; as a rule, with but few exceptions, we consider this a dangerous practice. Any uterus that cannot be put in position by bi-manual manipulation, with the patient on her back, should not as a practice be replaced with a sound. The statement is made that a ring pessary has reduced a posterior displacement without the aid of the surgeon. Under the surgical treatment a detailed account is given

of the different operations, and much credit to that of Alexander, fixation to the abdominal wall being left only for those cases which are irreducible without the aid of an anæsthetic.

Descent of the uterus and cystocele and rectocele are treated together. Not much value is attributed to the various mechanical devices so liberally invented by many gynæcologists, and in the surgical treatment alone is dependence placed.

Colpo-perineorrhaphy is not considered to the extent that its worth demands. In its performance preference is given to the methods of Hegar and Martin, and no mention of Emmet's operation is made.

To the anterior wall only about half a page is devoted, a denudation is mentioned as Emmet's, which unmodified he (Emmet) has not practiced for years.

Nothing new is said on inversion of the uterus, the author advocating the gradual method of reduction in chronic cases.

The volume closes with a short chapter on the disorders of menstruation, but much that might have been said here would have been but a repetition of matter in previous chapters.

The work of the translator is well-done. L. C. BALDWIN.

SURGICAL DISEASES OF THE OVARIES AND FALLOPIAN TUBES, including Tubal Pregnancy. By J. Bland Sutton, F.R.C.S., Assistant Surgeon to the Middlesex Hospital, London. 12mo. 513 pp. Philadelphia, Lea Brothers & Co., 1892.

This book is divided into four parts, which are devoted respectively to Diseases of the Ovaries, Diseases of the Fallopian Tubes, Tubal Pregnancy, and to methods of performing operations for ovarian and tubal disease. The author has approached his work in the spirit of exact research, accepting as facts only those which are demonstrable in the pathological laboratory. In no department of surgery is the value of this kind of critical and philosophical inquiry more demonstrable than in that of pelvic affections. The immense amount of chaff which has accumulated, and which has swelled the literature of gynæcology requires sifting to get the wheat out of it.

The previous training of Mr. Sutton as anatomist, pathologist and surgeon has especially fitted him for this work. In the elucidation of obscure points he has availed himself of the help of comparative anatomy and physiology wherever possible. An excellent example of this occurs in his observations upon the physiology of normal menstruation, in his study of which he utilized Macaque monkeys, the uterus of which animal, in shape and even the structure of the mucous membrane and disposition of glands, is so similar to that of the human species that it may be considered as a miniature human uterus. He further studies the mucous membrane of uteri obtained from young women dying during menstruation, also the mucosa of Fallopian tubes removed surgically while menstruation was present. These are the sources which he relies upon for facts as to the conditions of the mucous lining of the uterus and tubes in menstruation. His conclusion is interesting and simple, viz. : In the human female the mucous membrane of the Fallopian tube undergoes no structural change during menstruation ; in the uterus any distinctive change is limited to shedding of the epithelium, and it is doubtful if this occurs normally. He confesses, however, that as to the cause, significance and utility of menstruation, we know nothing ! He concludes that the process of ovulation and menstruation are independent and not necessarily coincident. He states as incontrovertible facts that in the human ovary ovulation begins as early as in the seventh month of intruterine life, and is an active process during the first year of life. Then occurs a period of comparative repose, until the tenth or twelfth year, when the ripening of ova again begins, and goes on independently of menstruation even after the accession of the climacteric. Maturation of ova is going on constantly, and the presence of a ripe ovum concurrently with menstruation is a coincidence. Nevertheless the intimate relation of the ovaries to the menstrual function is indisputable. What the nature of the relation is, and how the control of the ovaries over the process is effected, is still to be ascertained. The important surgical fact remains that the removal of the ovaries and tubes will, with very rare exceptions, be followed by a permanent cessation of the menstrual function.

The chapter on Oophoritic Cysts is an excellent example of the grasp of the author on his subject. It is brief, but, after reading it, one cannot but feel that a clear, systematic and comprehensive presentation of this most important subject has been given. The text is elucidated by frequent illustrations. The following observation by the author explains his method, and the value of the observation cannot but commend itself to every one. He says: "It is only by patiently waiting for opportunities of securing cysts in very early stages that it is possible to elucidate their mode of origin. Much of the confusion which obscures the pathology of this question is due to the fact that most investigators have devoted their attention to large cysts."

The section of the book devoted to the diseases of the ovaries he closes with the following practical observation on the mortality attending operations for removal of ovarian tumors: "It would be interesting to be able to state definitely the risks of operation in each class of tumor; this will be impossible until surgeons feel disposed to accept some definite method of classification, and arrange their cases accordingly. Speaking generally, it may be said that in experienced hands the mortality varies from five to ten per cent. Here and there a few operators have published long runs of cases without death. This is very encouraging; but when large series of cases are collected the average mortality stated will be maintained. With less experienced operators the mortality after ovariectomy will vary from fifteen to twenty per cent.

As a prelude to the diseases of the Fallopian tubes he devotes a chapter to the anatomy of the tubes, the chief part of which is given to a demonstration that the folds of the tubal mucosa are glands whose probable function is to provide an albuminous fluid for the ovum as it traverses the Fallopian tube. Then follows a chapter devoted to salpingitis and its effects, which he states to be nearly always secondary to inflammations of the genital tract, *i. e.*, septic endometritis, gonorrhœa and cancer of the uterus. The sequence of the various processes are clearly traced which terminate in the closure of the abdominal ostium of the tube and the distension of the tube

with retained inflammatory products—hydrosalpinx and pyosalpinx ; also in the involvement of the pelvic peritoneum and the ovary. Chronic salpingitis, he states, upon the results of post-mortem examinations, to be very frequently found in individuals in whom the existence of such conditions was not suspected during life. As to dilated tubes filled with blood clot, his observations have convinced him that nearly all the specimens supposed to be examples of hæmato-salpinx are really gravid tubes in which a sufficiently careful examination will disclose some trace of an embryo or of chorionic villi. Tubercular salpingitis is described, and as a practical point in its diagnosis it is noted that while in the common forms of salpingitis the patients, whether single or married, not infrequently furnish a history of gonorrhœa or septic endometritis, the majority of reported cases of tubercular salpingitis have occurred in young women whose life in this respect is above suspicion. In girls about puberty any form of salpingitis, other than tubercular, is very exceptional.

Again, in discussing the diagnosis of chronic salpingitis the author states that it is a very common disease, and one that not infrequently imperils life ; even in cases where life is not endangered the pain and inconvenience the patients suffer are often such as to render their existence miserable. In this connection naturally follows a description of its differential diagnosis from other conditions that may simulate it, especially small tumors of the ovary, retroversion of the uterus, and parametritis. In the matter of treatment, importance is given to the medical treatment of the initial or acute stages of the affection, by means of which the prevention of much subsequent misery is possible. When, however, the mucous membrane of the tubes has become seriously damaged, the tube itself fixed by adhesions to surrounding structures, the ovary involved in the inflammation, and the lumen of the tube occluded, then the author admits drugs are of little avail. The following paragraph in which Mr. Sutton formulates his conclusions as to the treatment of such cases is a model of clear and forcible surgical teaching. He says: "The ordinary rules of surgery suggest that when the physical signs and history of the case indicate that the tubes are occluded and distended with pus

or other fluid, producing so much pain and inconvenience as to cause the patient to lead the life of a chronic invalid, then it is justifiable to remove them by abdominal section. To dilate and scrape the interior of the uterus in such cases, to tap them through the vagina, or attempt to disperse them by electricity, by moorbaths, or by mild purgatives, are modes of treatment which can only be described as ridiculous, and in many cases they are highly dangerous. It must be confessed that the whole difficulty in the treatment of these cases lies in the diagnosis. If the surgeon could be sure his patient were suffering from a collection of pus in the tubes he would have no more hesitation in removing them than he feels in recommending the excision of a sacculated and suppurating kidney."

The chapters treating of tubal pregnancy are exceeding interesting, and one is charmed with the clear and logical manner in which the author simplifies this subject and reduces to order the mass of chaotic observations that have hitherto accumulated. Tubal pregnancy is a much more common occurrence than has generally been recognized, but like its fellow tubal affection, salpingitis, it has only to be described in its more common types, and the profession taught to recognize it, for it to assume its proper place in pelvic pathology. Surgically the great epoch in the history of a tubal conception is the rupture of the tube, which, unless the ovum perishes from other causes at a very early date, is rarely deferred beyond the twelfth week. If the rupture is intraperitoneal, hemorrhage into the peritoneal cavity results, the amount depending upon the degree of the development of the ovum. After the first month the bleeding is usually very copious, and may cause death in a few hours. In a fair proportion of cases, however, the rupture is along the floor of the tube and opens into the connective tissue spaces of the broad ligament, among the meshes of which the blood is effused, and by the pressure of which it is prevented from assuming dangerous proportions. An hæmatoma of the broad ligament is thus produced. At this point in its history the embryo may perish, and ultimate recovery after absorption of the hæmatoma ensue. But in some instances the embryo remains uninjured and continues its development, while space is made for it

by the gradual separation of the layers of the broad ligament, and the later stripping up of the peritoneum from the pelvic viscera and walls. This sac again may rupture at any period of its development with a repetition of the hazards and consequences of the primary rupture, or it may remain intact while the fetus goes on to develop, usually feebly and imperfectly, to term, or the fetus may die at any period of its development, undergoing thereafter various degenerative changes while it is retained indefinitely in the body of the mother, or becoming infected by septic organisms is converted into a vast abscess filled with broken down and necrotic fetal debris. This is a brief outline of the chief facts of tubal gestation as given by the author. Tubal abortion, tubo-uterine and cornual gestation are also described. As to the treatment of tubal pregnancy Mr. Sutton declares for abdominal section as soon as the diagnosis is established, except in those cases in which there has occurred rupture into the tissue of the broad ligament with death of the embryo. He refuses to give any consideration to methods for killing the fetus by injecting drugs into it, or by passing electrical currents through it, procedures which he characterizes as unsurgical and unsatisfactory.

The concluding section on methods of performing operations for ovarian and tubal diseases presents very clearly the generally practiced technique of such operations. Nothing is said about the advantage derivable from the Trendelenburg elevated pelvis position in such cases. The conditions in which drainage is indicated are judiciously elaborated and its practice commended. Abundant irrigation of the peritoneal cavity is advised whenever there has been much oozing from separated adhesions, or pus or other secretions have flowed into the cavity. In the practice of irrigation the author suggests the use of a little common sense upon the part of the surgeon, and maintains that plain water at a temperature of 110° to 115° F., is the safest medium to use.

We have thus sketched the character of this book of Mr. Sutton's. We have read it with pleasure and profit. Its methods and manner commend it to one's judgment as a reliable and comprehensive statement of present knowledge and practice in the domain of the surgery of the uterine appendages. LEWIS S. PILCHER.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Volume IX. Edited by J. EWING MEARS, M. D., Recorder of the Association. Philadelphia, 1891. Large 8vo., pp. 508.

This volume contains the work of the meeting of the association in Washington, D. C., in September, 1891, during the Congress of American Physicians and Surgeons, and, in consequence of the international character of the discussions, as well as the intrinsic value of the papers themselves, it forms an exceedingly valuable, if not the most valuable, volume of the transactions.

The paper of Senn on the treatment of bone and joint tuberculosis appeared in full in the January Annals. Three of the papers are devoted to cerebral and spinal surgery. The first, the present status of brain surgery, as practiced by Philadelphia surgeons, by D. Hayes Agnew, M. D., of Philadelphia, covers the field of operative surgery of the skull and brain in a most satisfactory manner. Dr. Agnew, however, tried to lay down absolute rules of practice from too contracted a field of observation, and, consequently, when the broader experience of the association was drawn upon by the discussion he found himself exposed to decided and authoritative differences of opinion. It is a mistake to ignore the general literature of a subject and confine statistics to cases coming within the observation of a few surgeons practicing in a single locality, even though those men are fully equipped and experienced.

The second paper in this series, penetrating pistol shot wounds of the skull, by E. H. Bradford, M. D., and H. L. Smith, M. D., of Boston, is a review of the question whether, from the point of view of recent surgery, operative interference offers better chances of recovery than non-interference. The result of the study of the ninety-one tabulated cases leads to the decision that, inasmuch as the mortality is less in cases that have been trephined than in those where no operation has been undertaken, "the treatment of pistol shot wounds of the skull should be conducted on the same principles as the treatment of perforating fractures of the skull by a sharp instrument. That is, the wound should be thoroughly explored and thoroughly cleansed; all loose fragments should be removed, including

the bullet, if readily accessible. Drainage and strict asepsis are essential to the best results." In the final paper, the surgery of the spine, by J. William White, M. D., of Philadelphia, the whole field of operative surgery of the spine is gone over. Some errors are noticed in the tabulated cases; for instance, Jackson's case of removal of the laminae for Potts disease appears twice, and in neither this nor the table on cases of operation for traumatism of the spine are the statistics complete. This naturally affects the value of the statistical portion of the paper, but it is still a valuable contribution to our knowledge of this subject.

A most opportune, masterly and scientific discussion of the recurrence of carcinoma of the breast is contributed by Frederic S. Dennis, M. D., of New York. The general statistics of the operation are first discussed, and are followed by a resumé of the author's personal experience. These statistics, so far as we know, are the best yet published—at least as regards the mortality. If our memory is not at fault the percentage of recurrences corresponds exactly with the results presented to the French Academy some two or three years ago. The author concludes that "with early and radical operations the recurrence of carcinoma of the breast after removal of the gland will be, comparatively speaking, of rare occurrence."

Asepsis and antisepsis in operative surgery, by Arpdd G. Gerster, of New York, and aseptic operative technique, by George Ryerson Fowler, of Brooklyn, exhaust this subject. Both papers furnish valuable suggestions for the proper management of operative cases, and to a certain extent supplement each other. The report of the commission "on the results of treatment of simple fractures of the shaft of the femur," presented by Stephen Smith, M. D., of New York, is of very great value in determining, in an authoritative way, what may be considered as a successful result in this condition. Embodying as it does the views of nearly every member of the association its conclusions, even though they differ slightly from former teachings, cannot fail to carry conviction, and must exert much influence in deciding suits for damages. It is to be regretted that the report was not signed by all the commissioners, as that would have disarmed all possibility of criticism.

Oscar H. Allis, M. D., of Philadelphia, contributes an experimental study of "Fractures in the Upper Third of the Femur below the Trochanter Minor," in which he shows that extension is an inefficient method of treatment and advocates cutting down upon and wiring the fragments as the only possible means of obtaining successful coaptation without deformity.

Dr. Lewis A. Stimson, in two papers "The Treatment of Fractures of the Humerus Involving the Elbow Joint" and "The Treatment of Some Old Unreduced Dislocations of the Elbow," takes the opportunity to emphasize some of the commoner errors in the diagnosis and treatment of injuries about this joint. Taken together the two papers furnish most useful suggestions in regard to the surgery of this region.

"Intra-Thoracic Surgery: Bronchotomy Through the Chest Wall for Foreign Bodies Impacted in the Bronchi," by De Forrest Willard, M.D. Ph.D., of Philadelphia, furnishes a most valuable corroboration from the experimental point of view of the facts that were brought out so strongly from a practical experience in the sad case so recently under observation in Brooklyn. As in that case bronchotomy was found impracticable, so the conclusions here point to its great difficulties and dangers. Low tracheotomy is advocated as the best means of attaining the end, and foreign bodies that cannot be removed by means of a low tracheotomy cannot be reached by the operation through the chest wall.

A report of a unique "Case of Diffuse Fibroma, with a Tendency to Intra-Canalicular Growth of Both Breasts," by C. B. Porter, M. D., of Boston; a paper by Albert Vanderveer, M. D., of Albany on "Retro-Peritoneal Tumors, their Anatomical Relations, Pathology, Diagnosis and Treatment;" "Fractures of the Bones Which Form the Elbow Joint and Their Treatment," by L. E. Lane, M. D., of San Francisco, in which he takes direct issue with Stimson's statement that under any treatment some cases of injury of this joint will inevitably result in permanent stiffness, and states that he is confident that if the fractures are dressed in the straight position, with early and long-continued passive motion, no fractured elbow would recover "indissolubly fastened;" "Dislocations of the Carpus," by J. S. Wight, M.D., of

Brooklyn, N. Y. ; and " Resection of the Wrist : Recovery ; Free Use of the Limb Restored to Its Normal Position," by R. Lavistra, M.D., of the City of Mexico, Mex., completes this most interesting collection of papers.

SAMUEL LLOYD.

ESSENTIALS OF MEDICAL ELECTRICITY. By D. D. STEWART, M. D., and E. S. LAWRENCE, M. D. 156 pages. 65 illustrations. 1892. W. B. Saunders, Philadelphia.

The object of this little work, as its name suggests, is to put into the hands of medical students and busy practitioners, in a condensed form, the principles of the science of electricity and their application in the practice of medicine.

The scope of the work is a large one, treating as it does of nearly all the topics found in the larger works on electricity.

The selection and arrangement of material is done in a skillful manner. The less practical subjects, and those with which the average practitioner is familiar, are dismissed with a few words ; while some of the more difficult and useful subjects, including electrical units, measurement of currents and arrangement of cells for large or small external resistance, are treated of comparatively fully. Reaction of degeneration, its definition, cause and determination being the subject which most often causes the doctor to consult his books, is treated of with especial care and clearness, mentioning all the smaller details necessary for its successful determination, and showing withal that the author is writing from a thorough practical knowledge of the subject.

The newer method of the therapeutical application of statical electricity is well illustrated and described in part by quotations from an enthusiastic paper by Dr. Morton, of New York.

Part II gives a list of about forty diseases amenable to treatment by electricity and the most approved mode of application in each case. Its limit of usefulness in many of these disorders is not fully given, but that, no doubt, can be determined only too soon by the observing physician.

Compared with works of its kind, which certainly have a place among busy practitioners and students with whom a book frequently increases in value in inverse proportion to its size, this one has been eminently successful in presenting a good working knowledge of the subject.

G. R. WHITE.

OBITUARY.

D. HAYES AGNEW.

DR. D. HAYES AGNEW, Emeritus Professor of Surgery and Honorary Professor of Clinical Surgery at the University of Pennsylvania, died at his home, 1601 Walnut Street, Philadelphia, on Tuesday afternoon, March 22, 1892, in the seventy-fourth year of his age.

After more than half a century of most assiduous work in his profession, continued almost uninterruptedly up to the time of his death, the end came, fortunately for him, quickly and peacefully. Although he had been ill on several occasions in the past few years, no serious results had occurred until the sudden development, ten days before his death, of an attack of angina pectoris, caused, as was afterward proved, by stenosis of the left coronary artery of his heart. Speedily arose other symptoms due to degeneration of the kidneys, which was slowly progressive, the immediate cause of his death being uræmia.

Dr. Agnew was born, November 21, 1818, in Lancaster County, Pennsylvania. He was the son of Dr. Robert Agnew, who was for many years the leading practitioner of his region. From both father and mother he was of Scotch-French descent, a race that is singularly industrious, God-fearing and intelligent. His mother was Agnes Noble, a woman of extraordinary strength of character, and from her, undoubtedly, her famous son obtained many of the fundamental elements of his character. She came of a long-lived race, living to the age of ninety-one years. Dr. D. Hayes Agnew began his classical education at the Moscow Academy, a Chester county institution of the period, in charge of the Rev. Francis Latta. He continued his studies at Jefferson College, Canonsburg, Pa., subsequently completing his general education at Newark College, Delaware. Selecting medicine as a profession, he entered upon its study at the University of Pennsylvania, whence he graduated April 6, 1838. Returning to his native place, he entered upon the practice of medicine, and was

married to Margaret Creighton Irwin, daughter of Samuel Irwin, of Pleasant Garden Forges, in 1841. To her assistance and advice he ascribed much of his later success. After some years of practice in Lancaster and Chester Counties he was persuaded to accept a very flattering offer to assume control of the large iron interests of his father-in-law. He remained in this business for three years, when its failure induced him to return to the practice of medicine. He had demonstrated his business abilities, but the causes which led to the failure of the firm of which he was a member were totally beyond his control. His love for anatomy and dissection made his surroundings in the country uncongenial. Feeling that if he would advance he must seek a larger field, he came to Philadelphia in 1853. He was then in early middle age, being thirty-five years old. Contrary to the usual law, his great successes have been acquired since that time. In 1854 Dr. Agnew was chosen one of the surgeons of the Philadelphia Hospital, where he left a perpetual memorial of his labors in the founding of the present Pathological Museum, of which he was a long time curator, and rendered great service in opening the clinical material of the hospital to the use of students. At the same time he began the delivery of lectures at the Philadelphia School of Anatomy. So widely known did the School become that at the outbreak of the civil war his class numbered 265 students, representing nearly every State in the country, and being the largest class studying under one teacher. In this connection he also established the Philadelphia School of Operative Surgery. In 1863 he became Demonstrator of Anatomy and Assistant Lecturer on Clinical Surgery in the Medical Department of the University of Pennsylvania. He brought to the University a well-grown reputation as an operator and a teacher. In 1870 he was made Professor of Clinical Surgery, and in 1871 John Rhea Barton Professor of the Principles and Practice of Surgery. This chair he held until 1889, when he retired from active service at the University, the position of Honorary Professor of Clinical Surgery being created for his honor and for opportunity to continue occasional instruction.

He was surgeon to the Wills Eye Hospital, being chosen in 1864. One year later he was appointed on the surgical staff of the Pennsylvania Hospital, but the inauguration of a policy

with which he could not agree compelled him to resign. But in 1877 the Board of Managers of that institution, of their own volition, re-elected him to his former place, an occurrence without parallel in the history of that institution. In 1867 he was chosen one of the surgeons at the Orthopædic Hospital. He took an active part in the building of the Presbyterian Hospital, and shortly before his death that hospital bestowed upon him unsought the title of Honorary Surgeon, he being the only one who has ever held that position.

An experience which proved most valuable was his service as consulting surgeon at the great Mower Hospital at Chestnut Hill. It was the largest hospital in the country, being under the care of forty-seven resident physicians. Dr. Agnew acted as a consultant general and, all the dangerous cases and difficult operations came under his hands. At one time he had 5,000 patients, with gunshot wounds, under his care.

Dr. Agnew had been President of the Philadelphia College of Physicians, the County Medical Society, the Philadelphia Academy of Surgery, the State Medical Society, the American Medical Association and the American Surgical Association.

For more than thirty years Dr. Agnew has stamped his impress not only upon the surgical tone of his ever-widening circle, but he has given a distinctly elevated character to the surgical atmosphere of his city and country. Great as have been the many learned teachers of the University of Pennsylvania, none have brought more honor to her walls than D. Hayes Agnew. His skill in presenting great surgical truths, both didactically and clinically, his mechanical dexterity at the operating-table, combined with his calm, clear and accurate judgment, his keen insight into disease, rendered him famous over two continents, and steadily increased his own renown and that of his *Alma Mater*. In his middle life specialists in surgery were practically unknown. For many years he was one of the best operating ophthalmologists in the city; he was a skilled gynecologist, and in genito-urinary troubles his success was most brilliant. In his early days the division between general medicine and general surgery was not so distinctly drawn, and up to the time of his death there was no consultant in Philadelphia whose opinion was more

highly valued in regard to many diseases of a strictly medical character. His interpretation of results to be obtained by palpation in any part of the body was often wonderful. His fingers, his hands, his eyes, and all his senses were so thoroughly educated that his deductions were speedily and thoroughly made, his errors being few.

In consultation his manners and his methods were inimitable, and placed his services in constant demand. If he felt that any error in diagnosis had been made by the attending physician, the correct interpretation of the symptoms was placed before him with such skill that not only was the patient ignorant of the fault, but the physician himself was half inclined to believe that his own astuteness had discovered the error. There was never any attempt at self-exaltation at the expense of others. His services were in demand far and wide, and each of the thousands of physicians, whom he sent to all parts of the country during his forty years of teaching, loved him as a personal friend. His magnetism was most remarkable.

As a teacher with knife in hand and cadaver before him, his clear concise instruction was so remarkable that a subject hitherto incomprehensible to students seemed as clear as day. No one ever forgot his demonstration of the surgical anatomy of the perineum or of hernia. His eloquence sprang from a thoughtful mastery of his subject and an enthusiasm engendered by an ardent love for his work. His industry was prodigious. Early at work in the morning, he steadily but quietly pursued it through the day, and often spent the nights in journeys to distant points for consultation, returning on the following morning to resume his full measure of labor. His practice was enormous, and yet he never slighted a case. He was markedly reserved, yet always cheerful; quiet, but never depressed. He never spoke words of bitterness or anger, although he could be firm when needed.

As a writer his great "*System of Surgery*" will stand as a monument of a unique experience, of one man's knowledge of surgical disease. Each subject is treated in the most encyclopædic way, and yet it is rounded out and made complete by his own personal experiences. Written, as the work was, amidst the demands of practice and in hours stolen from sleep, the mechan-

ical labor alone, and the amount of research it necessitated, would have appalled any less vigorous worker, but he was able not only to complete it, but to give the time for revision for a second edition. He issued also a "Practical Anatomy for Dissectors," essays on "Lacerations of the Female Perineum," "Vesico-vaginal Fistula," and "Anatomy in Relation to Medicine and Surgery." In addition, he has contributed extensively to medical journals. The last paper he wrote was on "The Present Status of Brain Surgery, Based on the Practice of Philadelphia Physicians."

A staunch and faithful member of the Presbyterian Church, he was rarely absent from his place at its services, and in his private life, in daily contact with his family, his virtues and magnetism were even more marked than they were as shown to the public. His qualities of heart were such that volumes might be written of this man's deeds of kindness to rich and poor. He was a true, sincere, honest Christian man. He has left an example to all the profession, and in his life fully exemplified the graces which adorn a Christian life.—*From the University Medical Magazine.*